UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,433	01/10/2006	Egbert Classen	2003P00991WOUS	8866

46726 7590 02/22/2010

BSH HOME APPLIANCES CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
100 BOSCH BOULEVARD
NEW BERN, NC 28562

EXAMINER	
STINSON, FRANKIE L	

ART UNIT	PAPER NUMBER
1792	

NOTIFICATION DATE	DELIVERY MODE
02/22/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

NBN-IntelProp@bshg.com

Office Action Summary	Application No.	Applicant(s)	
	10/564,433	CLASSEN ET AL.	
	Examiner	Art Unit	
	FRANKIE L. STINSON	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> a. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinh (U. S. Pat. No. 5,343,632) in view of France'322 (France 2 491 322) and Moratalla (U. S. Pat. No. 5,732,562).

With Dinh disclosing the device for use with a dishwasher (col. 8, lines 9-10), it is understood, that instead of the drying chamber (234) as discloses in fig. 5, there would be a washing chamber as annotated in fig. 5 below, and therefore the following is provided.

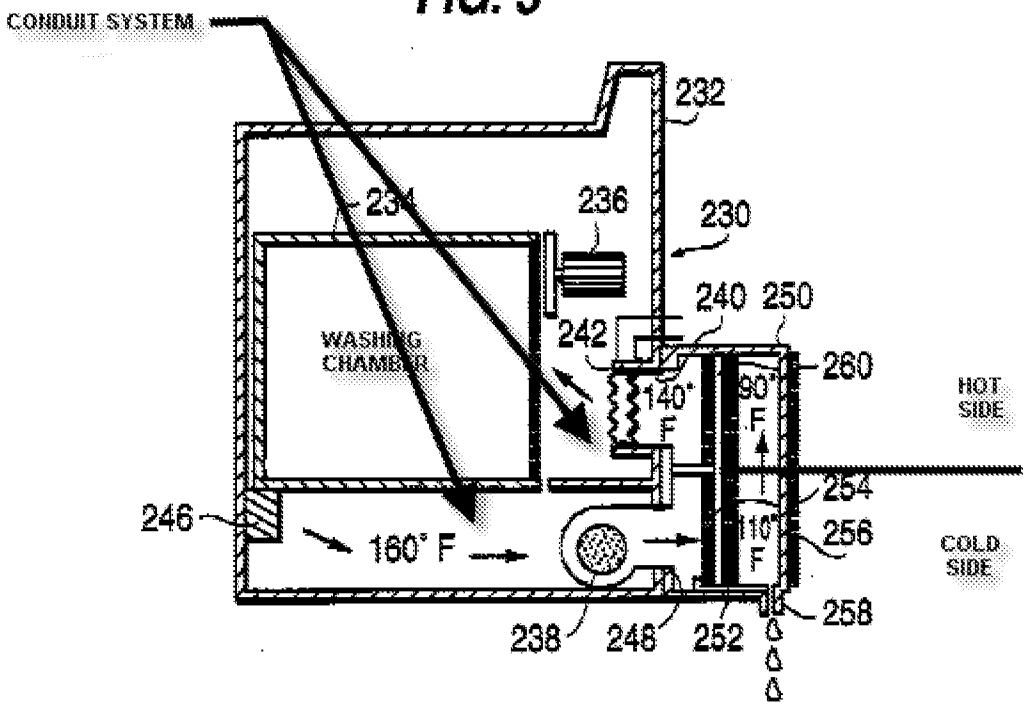
Re claim 10, the patent to Dinh is cited disclosing a dishwasher comprising:

a washing chamber; and

a conduit system (see annotated fig. 5 below) connected to the washing chamber in an air-guiding manner such that air is guided from the washing chamber to the conduit system and air is guided from the conduit system to the washing chamber and the conduit system including a cold side portion (as at 256, see annotated fig. 5 below) and a hot side portion (as at 260, see annotated fig. 5 below), and including at least one heat pipe/tube (col. 5, lines 8-36) with heat pipe/tube extending into the cold side portion of the conduit system and into the hot side portion of the conduit system (see annotated fig. 5 below) and the conduit system being operable to guide air from the washing chamber through the cold side portion, whereupon the heat pipe/tube promotes a

cooling of air in the cold side portion of the conduit system (col. 7, lines 30-35) with a resultant condensing of moisture (as at 258) out of the cooled air, to thereafter guide cooled air from the cold side portion to the hot side portion,

FIG. 5



whereupon the heat pipe/tube promotes heating of the air in the hot side portion of the conduit system (col. 7, line 67 thru col. 8, line 5), and to thereafter guide such heated air from the hot side portion to the washing chamber and the heat pipe/tube operating to conduct heat from the cold portion of the conduit system the hot portion of the conduit system with the heat pipe/tube receiving heat from air guided there past at the cold side portion of the conduit system and conducting such received heat to hot side portion that differs from the claim only in the recitation of the basket and the heat tube/pipe having a

pair of ends. France'322 is cited disclosing the dishwasher having a basket as claimed. It therefore would have been obvious to one having ordinary skill in the art, with predictable results, to modify the system/arrangement of Dinh, to include a basket as taught by France'322, with no change in their respective function, since it is old and well known to support the dishes in a basket, to ensure the exposure of the dishes to high volumes of wash water, and to aid in the draining of the liquid from the dishes. In regard to the heat pipe/tube having a pair of ends, Moratalla (see fig. 3) is cited disclosing that it is old and well known in an air dehumidification system (see abstract), to provide a heat pipe/tube (185) having a pair of ends, one of the ends (190) of the heat pipe/tube extending portion of a conduit system (170) to promote cooling and the other end (255) of the heat pipe/tube extending into a portion of the conduit system to promote heating (255). It therefore would have been obvious to one having ordinary skill in the art, with predictable results, to modify the heat/pipe of Dinh, to include a pair of ends as taught by Moratalla, with no change in their respective function, since Dinh specifically discloses that a "wide variety of heat exchangers could be used" (col. 5 lines 18-19), "the cooler/condenser may be formed by any cooling element" (col. 7, lines 32-33, see MPEP 2144.06 SUBSTITUTING EQUIVALENTS KNOWN FOR THE SAME PURPOSE). It also would have been obvious for the purpose of increasing the efficiency of the system since it is also old and well known in the art to recover waste heat for preheating. All of the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination, (i.e., the combination of

known old elements into a single device) would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Re claim 11, Dinh/France'322 disclose the drying cycle. Re claim 12, Dinh as, modified when employed in a dishwasher like that of France'322, discloses the outlet with a pipe (21) communicated with the at least one heat pipe/tube, the at least one heat pipe/tube includes a pipe communicating one end thereof with the other end thereof, and the washing container includes an inlet with a pipe (29) communicated with the at least one heat tube and further comprising a fan (27) arranged in the outlet with the pipe communicating the washing basket with the at least one heat tube, the fan being operable to supply at least some of the air in the washing basket to the conduit system at least temporarily. Re claim 13, Dinh, as proposedly modified, discloses the air being cooled by the heat pipe/tube. Re claim 14, Dinh, as proposedly modified, discloses the air being heated by the heat pipe/tube. Re claim 15, Dinh (as at 242), France'322 (as at 28) and Moratalla (as at 265) disclose the heater. Re claim 16-17, DInh (as at 256) and Moratalla disclose the condenser (200) as claimed.

3. Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinh in view of UK'035 (United Kingdom 2 059 035), Grover (U. S. Pat. No. 3,865,184), Germany'506 (Germany 31 34 506) or Germany'859 (Germany 29 14 859) .

With Dinh and France'322 combined an cited as applied above, note that in regard to claim 19, Dinh is cited a dishwasher comprising:

a washing basket; and

a conduit system connected to the washing basket in a closed air system (col. 4,

lines 45-55) such that air is guided from the washing basket to the conduit system and air is guided from the conduit system to the washing basket without outside air input,

the conduit system including a cold side portion (as noted above) and a hot side portion (as noted above) and including at least one heat pipe/tube with the heat pipe/tube extending into the cold side portion of the conduit system, and into the hot side portion of the conduit system,

the conduit system being operable to guide air in a closed loop from the washing basket through the cold side portion, whereupon the heat pipe/tube promotes a cooling of air in the cold side portion of the conduit system with a resultant condensing of moisture out of the cooled air, to thereafter guide cooled air from the cold side portion to the hot side portion, whereupon the heat pipe/tube promotes heating of the air in the hot side portion of the conduit system, and to thereafter guide such heated air from the hot side portion to the washing basket,

the heat pipe/tube operating to conduct heat from the cold portion of the conduit system to the hot portion of the conduit system with the heat pipe/tube receiving heat from air guided therepast at the cold side portion of the conduit system and conducting such received heat that differs from the claim only in the recitation of the heat pipe/tube having a pair of ends as claimed. UK'035 (as at 14, 15), Grover (as at 25, 26), Germany'506 (as at 21, 22) and Germany'859 (see fig. 3) are each cited disclosing that it is old and well known in an air dehumidification system, to provide a heat pipe/tube having a pair of ends, with one of the ends of the heat pipe/tube extending into a cold

side portion of a conduit system to promote cooling and the other end of the heat pipe/tube extending into a hot side portion of a conduit system to promote heating as claimed. It therefore would have been obvious to one having ordinary skill in the art, with predictable results, to modify the heat/pipe of Dinh, to include a pair of ends as taught by UK'035, Grover, Germany'506 or Germany'859, with no change in their respective function, since Dinh specifically discloses that a "wide variety of heat exchangers could be used" (col. 5 lines 18-19), "the cooler/condenser may be formed by any cooling element" (col. 7, lines 32-33, see MPEP 2144.06 SUBSTITUTING EQUIVALENTS KNOWN FOR THE SAME PURPOSE). It also would have been obvious for the purpose of increasing the efficiency of the system since it is also old and well known in the art to recover waste heat for preheating. All of the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination, (i.e., the combination of known old elements into a single device) would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Re claim 20, Dinh (as at 242), UK'035 (as at Germany'506 (as at 11) and Germany'859 (as at 9) disclose the heater. Re claim 21, Dinh (as at 260), UK'035 (as at 10), Germany'506 (as at 10) and Germany'859 (as at 7) disclose the condenser. Re claim 22, Dinh (as at 256), UK'035 (as at 14), Germany'506 (as at 22, see fig. 3) and Germany'859 (see fig. 3) disclose the heat pipe/tube comprising a condenser. Re claim 23, Re claim 21, Dinh, Grover, UK'035, Germany'506, and Germany'859 each disclose the heating and cooling taking place at the same time.

4. Applicant's arguments filed December 11, 2009 have been fully considered but they are not persuasive. In regard to the remark that Moratalla fails to disclose the heat exchanger extending into a cold side and a hot side, note that this subject matter is also disclosed in Dinh as noted above. In regard to the closed system, note the closed system of Dinh as noted above and also note the closed systems of Germany'859 and Germany'506.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Germany'372 ,Germany'641 and Japan'796, note the heat exchangers and the dehumidification systems.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANKIE L. STINSON whose telephone number is

(571) 272-1308. The examiner can normally be reached on M-F from 5:30 am to 2:00 pm and some Saturdays from approximately 5:30 am to 11:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached on (571) 272-1700. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/FRANKIE L. STINSON/
Primary Examiner, Art Unit 1792